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MEMORANDUM

Date: September 2, 2008

To: Technology Center Directors
Patent Examining Corps

From: John Love 
Deputy Commissioner for Patent Examination Policy

Subject: Rejections under 35 U.S.C. 112, second paragraph, when examining means (or step) plus function claim limitations under 35 U.S.C. 112, sixth paragraph

The purpose of this memorandum and the companion memorandum entitled "Indefiniteness Rejections under 35 U.S.C. 112, second paragraph" is to remind the examining corps of the appropriate use of indefiniteness rejections under 35 U.S.C. 112, second paragraph. This memorandum focuses on rejections under 35 U.S.C. 112, second paragraph, when examining means (or step) plus function limitations under 35 U.S.C. 112, sixth paragraph, and provides form paragraphs for these rejections. The primary purpose of the definiteness requirement of claim language is to ensure that the scope of the claims is clear so that the public is informed of the boundaries of what constitutes infringement of the patent.

A rejection under 35 U.S.C. 112, second paragraph, may be appropriate in the following situations when examining means (or step) plus function claim limitations under 35 U.S.C. 112, sixth paragraph:

- (I) When it is unclear whether a claim limitation invokes 35 U.S.C. 112, sixth paragraph;
- (II) When there is no disclosure (or insufficient disclosure) of structure, material, or acts for performing the claimed function; and/or
- (III) When applicant fails to clearly link or associate the disclosed structure, material, or acts to the claimed function.

I. When it is unclear whether a claim limitation invokes 35 U.S.C. 112, sixth paragraph.

A claim limitation is presumed to invoke 35 U.S.C. 112, sixth paragraph, if it meets the 3-prong analysis set forth in MPEP 2181, subsection I.:

1. The claim limitation must use the phrase "means for" or "step for";
2. The phrase "means for" or "step for" recited in the claim must be modified by functional language; and
3. The phrase "means for" or "step for" recited in the claim must not be modified by sufficient structure, material, or acts for achieving the specified function.

When it is unclear whether a claim limitation invokes 35 U.S.C. 112, sixth paragraph, a rejection under 35 U.S.C. 112, second paragraph, may be appropriate. *See MPEP 2181.*

For example:

(A) A claim limitation does not invoke 35 U.S.C. 112, sixth paragraph, if the phrase “means for” or “step for” is modified by sufficient structure, material, or acts recited in the claim for performing the claimed function. Therefore, if the phrase is modified by some structure, material, or acts recited in the claim, the examiner must determine whether the recited structure, material, or acts are sufficient for performing the claimed function. A rejection under 35 U.S.C. 112, second paragraph, is appropriate if it is unclear to one of ordinary skill in the art whether the recited structure, material, or acts in the claim are sufficient for performing the claimed function. Examiners may use form paragraph 7.34.16 (see section IV of this memorandum) in this situation.

(B) A claim limitation will not be presumed to invoke 35 U.S.C. 112, sixth paragraph, if the claim limitation does not include the phrase “means for” or “step for.” However, if an applicant wishes to have the claim limitation treated under 35 U.S.C. 112, sixth paragraph, applicant must either: (1) amend the claim to include the phrase “means for” or “step for” in accordance with the 3-prong analysis set forth in MPEP 2181; or (2) show that even though the phrase “means for” or “step for” is not used, the claim limitation is written as a function to be performed (e.g., “a device for printing”) and does not recite sufficient structure, material, or acts for performing the claimed function which would preclude application of 35 U.S.C. 112, sixth paragraph.¹ If it is unclear whether applicant has sufficiently shown a claim limitation is invoking 35 U.S.C. 112, sixth paragraph, a rejection under 35 U.S.C. 112, second paragraph, is appropriate (e.g., it is unclear whether the claim limitation is modified by sufficient structure for performing the claimed function or it is unclear whether the corresponding structure is sufficiently disclosed in the written description of the specification). Examiners may use form paragraph 7.34.17 (see section IV of this memorandum) in this situation.

II. When there is no disclosure (or insufficient disclosure) of structure, material, or acts for performing the claimed function.

Once the examiner determines that a claim limitation is a means (or step) plus function limitation invoking 35 U.S.C. 112, sixth paragraph, the examiner must review the written description of the specification to determine whether the corresponding structure, material, or acts that perform the claimed function are disclosed.² The disclosure must be reviewed from the point of view of one

¹ For more examples where the phrase “means for” or “step for” was not used in the claim but the Board of Patent Appeals and Interferences or the courts have determined that the claim limitation should be construed as invoking 35 U.S.C. 112, sixth paragraph, see MPEP 2181, subsection I.

² Note that drawings may provide a written description of an invention as required by 35 U.S.C. 112. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1565, 19 USPQ2d 1111, 1118 (Fed. Cir. 1991). The corresponding structure, material, or acts may be disclosed in the original drawings, figures, tables, or sequence listing. However, it would not be sufficient if the corresponding structure, material, or acts are disclosed only in the material incorporated by reference. *See MPEP 2181, subsection III.*

skilled in the relevant art.³ Such claim limitation must be construed to cover the corresponding structure, material, or acts described in the written description of the specification and equivalents thereof.⁴ A rejection under 35 U.S.C. 112, second paragraph, is appropriate if there is no disclosure (or insufficient disclosure) of structure, material, or acts for performing the claimed function. A bare statement that known techniques or methods can be used would not be a sufficient disclosure.⁵ Examiners may use form paragraph 7.34.18 in this situation.

For a computer-implemented means-plus-function claim limitation that invokes 35 U.S.C. 112, sixth paragraph, the corresponding structure is required to be more than simply a general purpose computer or microprocessor.⁶ The corresponding structure for a computer-implemented function must include the algorithm as well as the general purpose computer or microprocessor.⁷ The written description of the specification must at least disclose the algorithm that transforms the general purpose microprocessor to a special purpose computer programmed to perform the disclosed algorithm that performs the claimed function.⁸ Applicant may express the algorithm in any understandable terms including as a mathematical formula, in prose, in a flow chart, or in any other manner that provides sufficient structure.⁹ See MPEP 2181 for examples where the courts held that the corresponding structure is adequate for the computer-implemented means-plus-function claim limitations.¹⁰ A rejection under 35 U.S.C. 112, second paragraph, is appropriate if the written description of the specification discloses no corresponding algorithm.¹¹ For example, merely referencing to a general purpose computer with appropriate programming without providing any detailed explanation of the appropriate programming¹², or simply reciting software without providing some detail about the means to accomplish the function¹³, would not be an adequate disclosure of the corresponding structure to satisfy the requirements of 35 U.S.C. 112, second paragraph, even when one of ordinary skill in the art is capable of writing the software to convert a general purpose computer to a special purpose computer to perform the claimed function.

If there is no disclosure (or insufficient disclosure) of the structure for performing the claimed function in a means-plus-function limitation, the examiner should carefully determine whether the disclosure requirements of 35 U.S.C. 112, first paragraph, are met. The examiner should determine whether the written description adequately supports such claim under 35 U.S.C. 112,

³ See *Medical Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1211, 68 USPQ2d 1263, 1268 (Fed. Cir. 2003).

⁴ See 35 U.S.C. 112, sixth paragraph.

⁵ See *In re Donaldson Co.*, 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc); and *Biomedino, LLC v. Waters Technology Corp.*, 490 F.3d 946, 952, 83 USPQ2d 1118, 1123 (Fed. Cir. 2007).

⁶ See *Aristocrat Technologies, Inc. v. International Game Technology*, 521 F.3d 1328, 1333, 86 USPQ2d 1235, 1239-40 (Fed. Cir. 2008).

⁷ See *WMS Gaming, Inc. v. International Game Technology*, 184 F.3d 1339, 51 USPQ2d 1385 (Fed. Cir. 1999).

⁸ See *Aristocrat*, 521 F.3d at 1338, 86 USPQ2d at 1243.

⁹ See *Finisar Corp. v. The DIRECTV Group Inc.*, 523 F.3d 1323, 1340, 86 USPQ2d 1609, 1623 (Fed. Cir. 2008).

¹⁰ See, e.g., *In re Dossel*, 115 F.3d 942, 946-47, 42 USPQ2d 1881, 1885; *Intel Corp. v. VIA Technologies, Inc.*, 319 F.3d 1357, 1366, 65 USPQ2d 1934, 1941 (Fed. Cir. 2003).

¹¹ See *Aristocrat*, 521 F.3d at 1337-38, 86 USPQ2d at 1243.

¹² See *Id.* at 1334, 86 USPQ2d at 1240.

¹³ See *Finisar*, 523 F.3d at 1340-41, 86 USPQ2d at 1623.

first paragraph.¹⁴ To satisfy the written description requirement, the specification must describe the claimed invention in sufficient detail that one of ordinary skill in the art can reasonably conclude that the inventor had possession of the claimed invention.¹⁵ Furthermore, the examiner should determine whether the written description enables the scope of the claim as to the means-plus-function limitation which covers the corresponding structure disclosed in the written description of the specification. For example, if a claim limitation is construed to include both mechanical side impact sensors and electronic side impact sensors for performing the function of initiating an occupant protection apparatus (e.g., a side air bag in a car), the enablement requirement would not be satisfied if the written description did not enable the electronic side impact sensors as well as the mechanical side impact sensors.¹⁶ Also, if the written description fails to disclose any program or algorithm and more than routine experimentation would be required of one skilled in the art to generate such a program, the examiner would have a reasonable basis for making an enablement rejection under 35 U.S.C. 112, first paragraph. See MPEP 2164.06(c).

III. When applicant fails to clearly link or associate the disclosed structure, material, or acts to the claimed function.

The structure disclosed in the written description of the specification is the corresponding structure only if the written description of the specification or the prosecution history **clearly links or associates** that structure to the function recited in a means-plus-function claim limitation under 35 U.S.C. 112, sixth paragraph.¹⁷ The requirement that a particular structure be clearly linked with the claimed function in order to qualify as corresponding structure is the *quid pro quo* for the convenience of employing 35 U.S.C. 112, sixth paragraph, and is also supported by the requirement of 35 U.S.C. 112, second paragraph, that an invention must be particularly pointed out and distinctly claimed.¹⁸ For a means (or step) plus function claim limitation that invokes 35 U.S.C. 112, sixth paragraph, a rejection under 35 U.S.C. 112, second paragraph, is appropriate if one of ordinary skill in the art cannot identify what structure, material, or acts disclosed in the written description of the specification perform the claimed function. Examiners may use form paragraph 7.34.19 in this situation.

In rare circumstances where the written description of the specification implicitly (rather than expressly) sets forth the structure, material, or acts that perform the claimed function of a means (or step) plus function claim limitation, 35 U.S.C. 112, second paragraph, may be satisfied if one of ordinary skill in the art can identify the structure, material, or acts disclosed in the written description. In these situations, the examiner may still require the applicant to amend the specification pursuant to 37 CFR 1.75(d) and MPEP 608.01(o) to explicitly state, with reference to the terms and phrases of the claim, what structure, material, or acts perform the claimed

¹⁴ See MPEP 2181, subsections II and IV, and 2163.

¹⁵ See, e.g., *Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1319, 66 USPQ2d 1429, 1438 (Fed. Cir. 2003); *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d at 1563, 19 USPQ2d at 1116.

¹⁶ See *Auto. Techs. Int'l, Inc. v. BMW of N. Am., Inc.*, 501 F.3d 1274, 84 USPQ2d 1108 (Fed. Cir. 2007); and also *Sirtrick v. Dreamworks LLC*, 516 F.3d 993, 85 USPQ2d 1826 (Fed. Cir. 2008).

¹⁷ See *B. Braun Medical Inc., v. Abbott Laboratories*, 124 F.3d 1419, 1424, 43 USPQ2d 1896, 1900 (Fed. Cir. 1997).

¹⁸ See *Medical Instrumentation & Diagnostics Corp.*, 344 F.3d at 1211, 68 USPQ2d at 1268.

function. Accordingly, in the situation in which the written description only implicitly or inherently sets forth the structure, material, or acts corresponding to the claimed function in compliance with 35 U.S.C. 112, second paragraph:

- (1) The examiner should require applicant to clarify the record by either: (a) amending the written description to expressly recite what structure, material, or acts perform the claimed function, or (b) stating on the record what structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function (may use form paragraph 7.34.20); or
- (2) The examiner should state on the record what structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function.

IV. Form Paragraphs

The following new form paragraphs will be available as custom form paragraphs until OACS is updated:

¶ 7.34.16 Rejections under 35 U.S.C. 112, Second Paragraph, The Phrase “Means for” or “Step for” is Used, but Unclear Whether the Recited Structure, Material, or Acts in the Claim Are Sufficient for Performing the Claimed Function

The claim limitation “[1]” uses the phrase “means for” or “step for”, but it is modified by some structure, material, or acts recited in the claim. It is unclear whether the recited structure, material, or acts are sufficient for performing the claimed function which would preclude application of 35 U.S.C. 112, sixth paragraph, because [2].

If applicant wishes to have the claim limitation treated under 35 U.S.C. 112, sixth paragraph, applicant is required to amend the claim so that the phrase “means for” or “step for” is clearly **not** modified by sufficient structure, material, or acts for performing the claimed function.

If applicant does **not** wish to have the claim limitation treated under 35 U.S.C. 112, sixth paragraph, applicant is required to amend the claim so that it will clearly not be a means (or step) plus function limitation (e.g., deleting the phrase “means for” or “step for”).

Examiner Note:

1. In bracket 1, recite the claim limitation that causes the claim to be rejected under 35 U.S.C. 112, second paragraph.
2. In bracket 2, explain why it is unclear whether the claim limitation invokes 35 U.S.C. 112, sixth paragraph (e.g., why it is unclear whether the limitation recites sufficient structure, material, or acts to preclude the application of 35 U.S.C. 112, sixth paragraph.)

3. This form paragraph may be used when the phrase “means for” or “step for” is used in the claim limitation and it is unclear to one of ordinary skill in the art whether the recited structure, material, or acts in the claim are sufficient for performing the claimed function.
4. This form paragraph must be preceded by form paragraphs 7.30.02 and 7.34.01.

¶ 7.34.17 Rejections under 35 U.S.C. 112, 2nd Paragraph, Unclear Whether Claim Limitation is Invoking 35 U.S.C. 112, Sixth Paragraph, the Phrase “Means for” or “Step for” is Not Used

Applicant asserts that the claim element “[1]” is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, it is unclear whether the claim element is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph, because [2]. If applicant wishes to have the claim limitation treated under 35 U.S.C. 112, sixth paragraph, applicant is required to:

- (a) Amend the claim to include the phrase “means for” or “step for” in accordance with these guidelines: the phrase “means for” or “step for” must be modified by functional language and the phrase must **not** be modified by sufficient structure, material, or acts for performing the claimed function; or
- (b) Show that the claim limitation is written as a function to be performed and the claim does **not** recite sufficient structure, material, or acts for performing the claimed function which would preclude application of 35 U.S.C. 112, sixth paragraph. For more information, see MPEP 2181.

Examiner Note:

1. This form paragraph may be used in response to an applicant’s reply in which applicant asserted that a claim limitation is invoking 35 U.S.C. 112, sixth paragraph, even though the phrase “means for” or “step for” is not used in the claim limitation.
2. In bracket 1, recite the claim limitation that causes the claim to be rejected under 35 U.S.C. 112, second paragraph.
3. In bracket 2, explain why it is unclear whether the claim limitation invokes 35 U.S.C. 112, sixth paragraph. For example, it is unclear whether the claim limitation is modified by sufficient structure for performing the claimed function or it is unclear whether the corresponding structure is sufficiently disclosed in the written description of the specification.
4. This form paragraph must be preceded by form paragraphs 7.30.02 and 7.34.01.

¶ 7.34.18 Rejections under 35 U.S.C. 112, 2nd Paragraph, No Disclosure or Insufficient Disclosure of the Structure, Material, or Acts for Performing the Function Recited in a Claim Limitation Invoking 35 U.S.C. 112, Sixth Paragraph

Claim element “[1]” is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function. [2]

Applicant is required to:

- (a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or
- (b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

- (a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or
- (b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP 2181 and 608.01(o).

Examiner Note:

1. In bracket 1, recite the means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph.
2. In bracket 2, explain why there is insufficient disclosure of the corresponding structure, material, or acts for performing the claimed function.
3. This form paragraph must be preceded by form paragraphs 7.30.02 and 7.34.01.

¶ 7.34.19 Rejections under 35 U.S.C. 112, 2nd Paragraph, Fails to Clearly Link or Associate the Disclosed Structure, Material, or Acts to the Function Recited in a Claim Limitation Invoking 35 U.S.C. 112, Sixth Paragraph

Claim element “[1]” is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to clearly link or associate the disclosed structure, material, or acts to the claimed function such that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function. [2]

Applicant is required to:

- (a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or
- (b) Amend the written description of the specification such that it clearly links or associates the corresponding structure, material, or acts to the claimed function without introducing any new matter (35 U.S.C. 132(a)); or
- (c) State on the record where the corresponding structure, material, or acts are set forth in the written description of the specification that perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP 2181 and 608.01(o).

Examiner Note:

- 1. In bracket 1, recite the means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph.
- 2. In bracket 2, explain why the written description of the specification fails to clearly link or associate the structure, material, or acts to the claimed function.
- 3. This form paragraph must be preceded by form paragraphs 7.30.02 and 7.34.01.

¶ 7.34.20 The Specification is Objected to, The Written Description Only Implicitly or Inherently Discloses the Structure, Material, or Acts for Performing the Function Recited in a Claim Limitation Invoking 35 U.S.C. 112, Sixth Paragraph

Claim element “[1]” is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. The written description only implicitly or inherently sets forth the corresponding structure, material, or acts that perform the claimed function.

Pursuant to 37 CFR 1.75(d) and MPEP 608.01(o) and 2181, applicant is required to:

- (a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or
- (b) Amend the written description of the specification such that it expressly recites the corresponding structure, material, or acts that perform the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or
- (c) State on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function.

Examiner Note:

In bracket 1, recite the means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph.